AMENDMENTS TO THE CLAIMS

Please cancel Claims 11, 16-24, and 39-50 without prejudice as indicated below.

1.-6.   (Canceled)

7.   (Previously Presented) A computer monitoring and diagnostic system, comprising:

a remote computer configured to provide at least some control of the system;

one or more server computers, each server computer having a computing device and a housing and being in communication with the remote computer and any other server computers, wherein at least one of the server computers includes a plurality of canisters, each of the canisters having a plurality of card slots;

wherein the at least one server computer further comprises a plurality of canister controllers, wherein the canister controllers are configured to examine canister fan speeds associated with canister fans and to control power to the canisters;

wherein the at least one server computer further comprises a plurality of temperature detectors; and

wherein the system is configured to monitor temperatures indicated by the temperature detectors and to compare the indicated temperatures to a desired operating temperature range;

wherein the canister controller is further configured to automatically increase the canister fan speed of the at least one canister fan without user input when the indicated temperature exceeds an upper limit of the range, if the canister fan speed of least one canister fan is below a threshold;

wherein the canister controller is further configured to automatically power down the at least one server computer when the indicated temperature exceeds a warning threshold;

wherein the system is further configured to automatically indicate that the canister fan has a fault if the canister fan speed is zero;

wherein the system is further configured to automatically set the fan speed to high if the canister fan speed is below a fan speed threshold and above zero; and

wherein the system is further configured to automatically set the fan speed to low if the canister fan speed is above a fan speed threshold.

8.   (Previously Presented) The system of Claim 7, wherein at least one of the canisters is removable from the at least one server computer.

9.   (Original) The system of Claim 7, additionally comprising a microcontroller which is configured to log conditions about the canister to a recording system.

10.   (Original) The system of Claim 9, wherein the microcontroller is configured to log messages to non-volatile random access memory.

11.   (Canceled)

12.   (Previously Presented) A computer monitoring and diagnostic system, comprising:

a remote computer configured to provide at least some control of the system;

one or more server computers in communication with the remote computer and any other server computers, the server computer comprising a plurality of networked microprocessors;

at least one sensor, located within at least one of the server computers, configured to sense conditions within the at least one server computer, the at least one sensor communicating with the plurality of networked microprocessors, the conditions comprising a first condition and a second condition; and

one or more variable control components in communication with the plurality of networked microprocessors and with the remote computer;

wherein at least one microprocessor of the plurality of networked microprocessors is configured to modify the operation of the variable control components based at least in part on a comparison of the first sensed condition to a first desired range of operation and the second sensed condition to a second desired range of operation;

wherein the modification is performed without user input when the sensed condition falls outside the desired range of operation;

wherein the modification comprises automatically powering down the at least one server computer when the first sensed condition exceeds a warning threshold;

wherein the modification further comprises automatically setting the variable control component to high when the second sensed condition falls within the second desired range of operation; and

wherein the modification further comprises automatically setting the variable control component to low when the sensed second condition falls outside the second desired range of operation.

13.   (Original) The system of Claim 12, wherein sensing the conditions comprises checking for a microcontroller bus time-out.

14.   (Previously Presented) The system of Claim 12, wherein the system is configured to maintain a system log in a non-volatile random access memory.

15.   (Original) The system of Claim 12, wherein sensing the conditions comprises monitoring the speed of a canister fan.

16. – 24. (Canceled)

25.   (Previously Presented) A microcontroller network for diagnosing and managing the conditions of a computer, the microcontroller network comprising:

one or more cooling fans arranged within the computer;

one or more temperature detectors;

at least one microcontroller, located within the computer, wherein the microcontroller is in communication with the one or more cooling fans and temperature detectors and is configured to self-manage temperature conditions within the computer;

wherein the microcontroller is further configured to indicate that the cooling fan has a fault without user input if the fan speed of the cooling fan is zero, to set the fan speed of the cooling fan to high without user input if the fan speed is below a fan speed threshold and above zero, and to set the fan speed of the cooling fan to low without user input if the fan speed is above the fan speed threshold; and

wherein the microcontroller is further configured to increase the fan speed of the cooling fans located within the computer without user input if a temperature warning is indicated and to automatically power down the computer when the sensed temperature conditions exceed a warning threshold; and

a remote interface microcontroller and wherein the microcontroller network is configured such that the remote interface microcontroller continues to receive power so as to maintain communication with a remote computer even if the at least one computer is otherwise powered down.

26.   (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to check for a microcontroller bus time-out.

27.   (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to check for a manual system board reset.

28.   (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to check for a software reset command.

29.   (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to check for system faults.

30.   (Original) The microcontroller of Claim 25, wherein the microcontroller is configured to maintain a system log in a non-volatile random access memory.

31.   (Original) The microcontroller of Claim 25, wherein a selected one of the at least one microcontroller is configured to monitor the speed of a canister fan.

32.   (Previously Presented) A computer monitoring and diagnostic system, comprising:

a remote computer configured to provide at least some control of the system;

one or more server computers in communication with the remote computer and any other server computers, at least one of the server computers having a plurality of computer-related components, wherein the components have associated environmental and systemic conditions;

at least one sensor configured to sense the environmental and systemic conditions, wherein the sensor is located within the at least one server computer;

at least one environmental condition control component located within the at least one server computer; and

at least one microcontroller connected to the sensor, the environmental condition control component and the at least one server computer,

wherein the microcontroller is configured to modify operation of the environmental condition control component without user input if the sensed environmental conditions of the at least one server computer indicate a warning and to automatically power down the at least one server computer when the sensed environmental conditions exceed the ability of the environmental condition control component to maintain the sensed environmental conditions within a warning range of operation;

wherein the microcontroller is further configured to indicate a cooling fan fault without user input if the sensed systemic conditions of the at least one server computer indicate that the environmental condition control component is non-operational;

wherein the microcontroller is further configured to set the operation of the environmental condition control component to high without user input if the sensed systemic conditions of the at least one server computer indicate the sensed systemic condition is within a desired operating range;

wherein the microcontroller is further configured to set the operation of the environmental condition control component to low without user input if the sensed systemic conditions of the at least one server computer indicate the sensed systemic condition is outside the desired operating range.

33.   (Previously Presented) The system of Claim 32, wherein the microcontroller is located within the at least one server computer.

34.   (Previously Presented) The system of Claim 32, wherein the microcontroller is configured to process requests for environmental or systemic conditions from the at least one server computer and is configured to responsively provide the environmental or systemic conditions to the at least one server computer.

35.   (Original) The system of Claim 32, wherein the computer-related components comprise at least one component selected from the group consisting of: a system board, a central processing unit (CPU), a CPU fan, a backplane board, a backplane fan, a chassis, a chassis fan, a canister, a canister fan, a PCI card, and a PCI card fan.

36.   (Original) The system of Claim 32, wherein the sensor is configured to detect the temperature levels of selected ones of the computer-related components.

37.   (Original) The system of Claim 32, wherein the sensor is configured to detect the speed of a fan intended to cool down selected ones of the computer-related components.

38.   (Original) The system of Claim 32, wherein the sensor is configured to detect the voltage level applied to selected ones of the computer-related components.

39. – 50. (Canceled)

51.   (Previously Presented) The system of Claim 7, wherein the remote computer is configured to request status information from the one or more server computers.

52.   (Previously Presented) The system of Claim 51, wherein the system is configured such that the remote computer obtains system status information by retrieving a management information block (MIB) object from the one or more server computers.

53.   (Previously Presented) The system of Claim 7, wherein the at least one server computer comprises a remote interface controller and wherein the system is configured such that the remote interface controller continues to receive power so as to maintain communication with the remote computer even if the at least one server computer is otherwise powered down.

54.   (Previously Presented) The microcontroller of Claim 30, wherein the remote interface microcontroller is further configured to communicate data stored in the system log in non-volatile random access memory to the remote computer.